

CLAIMS

We claim:

- 5           1. A storage compartment equipped with a light emitting diode (LED) light source for illuminating contents inside the compartment,  
               the LED light source comprising a LED light engine outside the compartment and a light guide inside the  
               compartment, the light guide being optically coupled to be LED light engine for bringing light illumination from the LED light engine into the compartment via the light guide.
- 10           2. The storage compartment of claim 1, in which output of the LED light engine is controllable to vary intensity of the illumination inside the compartment.
- 15           3. The storage compartment of claim 1, the LED light engine including a plurality of different colors of LEDs  
               20 that contribute to the illumination inside the compartment.

4. The storage compartment of claim 3, the plurality of different colors including first, second, and third colors.

5 5. The storage compartment of claim 4, wherein the first, second, and third colors are red, green, and blue, respectively.

10 6. The storage compartment of claim 4, in which respective outputs of the first, second, and third color LEDs are separately controllable to allow a variably controlled color point of the illumination inside the compartment.

15 7. The storage compartment of claim 6, in which total output of the first, second, and third color LEDs is controllable to vary intensity of the illumination inside the compartment.

20 8. The storage compartment of claim 4, in which total output of the first, second, and third color LEDs is controllable to vary intensity of the illumination inside the compartment.

9. A method for illuminating frozen foods in a  
freezer cabinets, comprising:

providing a freezer cabinet with an externally  
mounted LED light engine,

5 providing the freezer cabinet with a light guide  
extending inside the cabinet,

optically coupling the LED light engine to the light  
guide, and

operating the LED light engine such that light is  
10 passed via the light guide into the interior of the cabinet to  
provide interior cabinet illumination at a first steady light  
level.

10. The method of claim 9, including varying output  
15 of the LED light engine to provide interior cabinet  
illumination at a second steady light level different from the  
first light level.

11. The method of claim 9, including providing the  
20 LED light engine with a plurality of different colors of LEDs  
that contribute to the illumination inside the compartment.

12. The method of claim 11, the plurality of different colors including first, second, and third colors.

13. The method of claim 12, with the first, second, 5 and third colors are red, green, and blue, respectively.

14. The method of claim 12, including varying respective outputs of the first, second, and third color LEDs to control color point of the illumination inside the 10 compartment.

15. The method of claim 14, including providing at least one feedback sensor in at least one of the light engine and the cabinet, and controlling the color point of the 15 illumination based on a signal received from the at least one feedback sensor.

16. The method of claim 15, wherein the feedback sensor senses color of contents of the cabinet and the color 20 point of the illumination is changed automatically depending on the color of the contents of the cabinet.

17. The method of claim 14, including providing a user interface, and controlling the color point of the illumination based on a signal received from the user interface.

5

18. The method of claim 14, including varying total output of the first, second, and third color LEDs to vary total intensity of the illumination inside the compartment.

10 19. The method of claim 12, including varying total output of the first, second, and third color LEDs to vary total intensity of the illumination inside the compartment.